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SEQUENCE LISTING

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<120> METHODS AND COMPOUNDS FOR MODULATING NUCLEAR RECEPTOR  
COACTIVATOR BINDING

<130> 9811-008-999

<140> 09/281,717  
<141> 1999-03-30

<150> US 60/079,956  
<151> 1998-03-30

<160> 60

<170> PatentIn version 3.0

<210> 1  
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<212> PRT  
<213> Homo sapiens

<220>  
<221> Variant  
<222> (2)..(3)  
<223> Xaa is any amino acid

<400> 1  
Leu Xaa Xaa Leu Leu  
1 5  
<210> 2  
<211> 6  
<212> PRT  
<213> Homo sapiens

<220>  
<221> Variant  
<222> (3)..(4)  
<223> Xaa is any amino acid

<400> 2  
Ile Leu Xaa Xaa Leu Leu  
1 5  
<210> 3  
<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> Variant  
<222> (2)..(3)  
<223> Xaa is any amino acid

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<400>      3
Phe Xaa Xaa Leu Trp
1          5
<210>    4
<211>    5
<212>    PRT
<213>    Homo sapiens

<220>
<221>    Variant
<222>    (2)..(3)
<223>    Xaa is any amino acid

<400>      4
Phe Xaa Xaa Ala Leu
1          5
<210>    5
<211>    34
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<213>    Homo sapiens

<400>      5
Ala Glu Gly His Ser Arg Leu His Asp Ser Lys Gly Gln Thr Lys Leu
1          5          10          15
Leu Gln Leu Leu Thr Thr Lys Ser Glu Gln Met Glu Pro Ser Pro Leu
20          25          30
Ala Ser

<210>    6
<211>    34
<212>    PRT
<213>    Homo sapiens

<220>
<221>    MUTAGEN
<222>    (15)..(15)
<223>    Ile --> Ala

<220>
<221>    MUTAGEN
<222>    (16)..(16)
<223>    Leu --> Ala

<220>
<221>    MUTAGEN
<222>    (19)..(20)
<223>    Leu --> Ala

<220>
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<222>    (16)..(20)
<223>    Leu(16) --> Ala; Leu (20) --> Ala

<220>
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<222>    (15)..(16)
<223>    IleLeu --> AlaAla

<220>
<221>    MUTAGEN

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<222> (17) .. (18)
<223> HisArg -->AlaAla

<220>
<221> MUTAGEN
<222> (15) .. (15)
<223> Ile -->Phe

<220>
<221> MUTAGEN
<222> (16) .. (16)
<223> Leu -->Phe

<220>
<221> MUTAGEN
<222> (19) .. (19)
<223> Leu -->Phe

<220>
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<222> (20) .. (20)
<223> Leu -->Phe

<400> 6
Pro Gly Ser Thr His Gly Thr Ser Leu Lys Glu Lys His Lys Ile Leu
1           5           10           15
His Arg Leu Leu Gln Asp Ser Ser Ser Pro Val Asp Leu Ala Lys Leu
20          25          30
Thr Ala

<210> 7
<211> 31
<212> PRT
<213> Homo sapiens

<400> 7
Glu Pro Ala Ser Pro Lys Lys Lys Glu Asn Ala Leu Leu Arg Tyr Leu
1           5           10           15
Leu Asp Lys Asp Asp Thr Lys Asp Ile Gly Leu Pro Glu Ile Thr
20          25          30
<210> 8
<211> 34
<212> PRT
<213> Homo sapiens

<400> 8
Ala Asp Gly Gln Ser Arg Leu His Asp Ser Lys Gly Gln Thr Lys Leu
1           5           10           15
Leu Gln Leu Leu Thr Thr Lys Ser Glu Gln Met Glu Pro Ser Pro Leu
20          25          30
Ala Ser

<210> 9
<211> 34
<212> PRT
<213> Homo sapiens

<400> 9
Ser Gly Ser Thr His Gly Thr Ser Leu Lys Glu Lys His Lys Ile Leu
1           5           10           15
His Arg Leu Leu Gln Asp Ser Ser Ser Pro Val Asp Leu Ala Lys Leu

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20	25	30
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Thr Ala

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<210> 10
<211> 31
<212> PRT
<213> Homo sapiens

<400> 10
Glu Pro Val Ser Pro Lys Lys Lys Glu Asn Ala Leu Leu Arg Tyr Leu
1           5          10          15
Leu Asp Lys Asp Asp Thr Lys Asp Ile Gly Leu Pro Glu Ile Thr
20          25          30

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<210> 11
<211> 34
<212> PRT
<213> Homo sapiens

<400> 11
Ala Glu Gly His Ser Arg Leu His Asp Ser Lys Gly Gln Thr Lys Leu
1           5          10          15
Leu Gln Leu Leu Thr Thr Lys Ser Glu Gln Met Glu Pro Ser Pro Leu
20          25          30

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Pro Ser

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<210> 12
<211> 34
<212> PRT
<213> Homo sapiens

<400> 12
Pro Gly Ser Thr His Gly Thr Ser Leu Lys Glu Lys His Lys Ile Leu
1           5          10          15
His Arg Leu Leu Gln Asp Ser Ser Pro Val Asp Leu Ala Lys Leu
20          25          30

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Thr Ala

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<210> 13
<211> 31
<212> PRT
<213> Homo sapiens

<400> 13
Glu Pro Ala Ser Pro Lys Lys Lys Glu Asn Ala Leu Leu Arg Tyr Leu
1           5          10          15
Leu Asp Lys Asp Asp Thr Lys Asp Ile Gly Leu Pro Ser Ile Thr
20          25          30

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<210> 14
<211> 34
<212> PRT
<213> Homo sapiens

<400> 14
Ala Glu Asn Gln Arg Gly Pro Leu Glu Ser Lys Gly His Lys Lys Leu
1           5          10          15
Leu Gln Leu Leu Thr Cys Ser Ser Glu Asp Arg Gly His Ser Ser Leu
20          25          30

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Thr Asn

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<210> 15
<211> 34

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<212> PRT  
<213> Homo sapiens

<400> 15  
Thr Ser Asn Met His Gly Ser Leu Leu Gln Glu Lys His Arg Ile Leu  
1 5 10 15  
His Lys Leu Leu Gln Asn Gly Asn Ser Pro Ala Glu Val Ala Lys Ile  
20 25 30

Thr Ala

<210> 16  
<211> 32  
<212> PRT  
<213> Homo sapiens

<400> 16  
Glu Gln Leu Ser Pro Lys Lys Glu Asn Asn Ala Leu Leu Arg Tyr  
1 5 10 15  
Leu Leu Asp Arg Asp Asp Pro Ser Asp Val Leu Ala Lys Lys Leu Gln  
20 25 30

<210> 17  
<211> 34  
<212> PRT  
<213> Homo sapiens

<400> 17  
Ala Glu Asn Gln Arg Gly Pro Leu Glu Ser Lys Gly His Lys Lys Leu  
1 5 10 15  
Leu Gln Leu Leu Thr Cys Ser Ser Asp Asp Arg Gly His Ser Ser Leu  
20 25 30

Thr Asn

<210> 18  
<211> 34  
<212> PRT  
<213> Homo sapiens

<400> 18  
Thr Ser Asn Met His Gly Ser Leu Leu Gln Glu Lys His Arg Ile Leu  
1 5 10 15  
His Lys Leu Leu Gln Asn Gly Asn Ser Pro Ala Glu Val Ala Lys Ile  
20 25 30

Thr Ala

<210> 19  
<211> 32  
<212> PRT  
<213> Homo sapiens

<400> 19  
Glu Gln Leu Ser Pro Lys Lys Glu Asn Asn Ala Leu Leu Arg Tyr  
1 5 10 15  
Leu Leu Asp Arg Asp Asp Pro Ser Asp Ala Leu Ser Lys Glu Leu Gln  
20 25 30

<210> 20  
<211> 34  
<212> PRT  
<213> Homo sapiens

<400> 20  
Ser Glu Thr Pro Arg Gly Pro Leu Glu Ser Lys Gly His Lys Lys Leu

1	5	10	15
Leu Gln Leu Leu Thr Cys Ser Ser Glu Asp Arg Gly His Ser Ser Leu			
20	25	30	
Thr Asn			
<210> 21			
<211> 34			
<212> PRT			
<213> Homo sapiens			
<400> 21			
Thr Ser Asn Val His Gly Ser Leu Leu Gln Glu Lys His Arg Ile Leu			
1	5	10	15
His Lys Leu Leu Gln Asn Gly Asn Ser Pro Ala Glu Val Ala Lys Ile			
20	25	30	
Thr Ala			
<210> 22			
<211> 32			
<212> PRT			
<213> Homo sapiens			
<400> 22			
Glu Gln Leu Ser Pro Lys Lys Lys Glu Asn Asn Ala Leu Leu Arg Tyr			
1	5	10	15
Leu Leu Asp Arg Asp Asp Pro Ser Asp Ala Leu Ser Lys Glu Leu Gln			
20	25	30	
<210> 23			
<211> 32			
<212> PRT			
<213> Homo sapiens			
<400> 23			
Ser Glu Gly Asp Ser Lys Tyr Ser Gln Thr Ser His Lys Leu Val Gln			
1	5	10	15
Leu Leu Thr Thr Ala Glu Gln Gln Leu Arg His Ala Asp Ile Asp			
20	25	30	
<210> 24			
<211> 33			
<212> PRT			
<213> Homo sapiens			
<400> 24			
Thr Cys Pro Ser Ser His Ser Ser Leu Thr Glu Arg His Lys Ile Leu			
1	5	10	15
His Arg Leu Leu Gln Glu Gly Ser Pro Ser Asp Ile Thr Thr Leu Ser			
20	25	30	
Val			
<210> 25			
<211> 34			
<212> PRT			
<213> Homo sapiens			
<400> 25			
Glu Leu Asp Ala Ala Lys Lys Lys Glu Ser Lys Asp His Gln Leu Leu			
1	5	10	15
Arg Tyr Leu Leu Asp Lys Asp Glu Lys Asp Leu Arg Ser Thr Pro Asn			
20	25	30	
Leu Cys			
<210> 26			

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<211> 34
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (2)..(2)
<223> Xaa is a negatively charged amino acid

<220>
<221> SITE
<222> (17)..(17)
<223> Xaa is a hydrophobic amino acid

<220>
<221> SITE
<222> (25)..(25)
<223> Xaa is a negatively charged amino acid

<220>
<221> Variant
<222> (1)..(1)
<223> Xaa is any amino acid

<220>
<221> Variant
<222> (3)..(9)
<223> Xaa is any amino acid

<220>
<221> Variant
<222> (11)..(14)
<223> Xaa is any amino acid

<220>
<221> Variant
<222> (22)..(24)
<223> Xaa is any amino acid

<220>
<221> Variant
<222> (26)..(34)
<223> Xaa is any amino acid

<400> 26
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Lys Leu
1 5 10 15
Xaa Gln Leu Leu Thr Xaa Xaa
20 25 30
Xaa Xaa

<210> 27
<211> 34
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (12)..(12)
<223> Xaa is a positively charged amino acid

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<220>
<221> SITE
<222> (14)..(14)
<223> Xaa is a positively charged amino acid

<220>
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<222> (18)..(18)
<223> Xaa is a positively charged amino acid

<220>
<221> SITE
<222> (28)..(28)
<223> Xaa is a negatively charged amino acid

<220>
<221> SITE
<222> (29)..(29)
<223> Xaa is a hydrophobic amino acid

<220>
<221> SITE
<222> (32)..(32)
<223> Xaa is a hydrophobic amino acid

<400>    27
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Xaa Glu Xaa His Xaa Ile Leu
1           5           10          15
His Xaa Leu Leu Gln Xaa Xaa Xaa Ser Pro Xaa Xaa Xaa Xaa Xaa
20          25          30

Xaa Xaa

<210> 28
<211> 34
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (22)..(22)
<223> Xaa is a positively charged amino acid

<220>
<221> SITE
<222> (24)..(24)
<223> Xaa is a negatively charged amino acid

<220>
<221> SITE
<222> (33)..(33)
<223> Xaa is a hydrophobic amino acid

<220>
<221> Variant
<222> (2)..(5)
<223> Xaa is any amino acid

<220>
<221> Variant
<222> (10)..(14)

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<223> Xaa is any amino acid

<220>
<221> Variant
<222> (25)..(32)
<223> Xaa is any amino acid

<220>
<221> Variant
<222> (34)..(34)
<223> Xaa is any amino acid

<400>    28
Glu Xaa Xaa Xaa Xaa Lys Lys Lys Glu Xaa Xaa Xaa Xaa Xaa Leu Leu
1           5           10          15
Arg Tyr Leu Leu Asp Xaa Asp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20          25          30
Xaa Xaa

<210> 29
<211> 18
<212> PRT
<213> Homo sapiens

<400>    29
Thr Ser Leu Lys Glu Lys His Lys Leu Leu Arg Tyr Leu Leu Gln Asp
1           5           10          15
Ser Ser

<210> 30
<211> 33
<212> PRT
<213> Homo sapiens

<220>
<221> MUTAGEN
<222> (5)..(5)
<223> Thr --> Arg (T281R)

<220>
<221> MUTAGEN
<222> (8)..(8)
<223> Val --> Arg (V284R)

<220>
<221> MUTAGEN
<222> (9)..(9)
<223> Asp --> Ala (D285A)

<220>
<221> MUTAGEN
<222> (12)..(12)
<223> Lys --> Ala (K288A)

<220>
<221> MUTAGEN
<222> (22)..(22)
<223> Cys --> Arg (C298R)

<220>
<221> MUTAGEN

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<222> (26) .. (26)
<223> Ile --> Arg (I302R)

<220>
<221> MUTAGEN
<222> (30) .. (30)
<223> Lys --> Ala (K306A)

<400> 30
Thr Pro Ala Ile Thr Arg Val Val Asp Phe Ala Lys Lys Leu Pro Met
1 5 10 15
Phe Cys Glu Leu Pro Cys Glu Asp Gln Ile Ile Leu Leu Lys Gly Cys
20 25 30

Cys
<210> 31
<211> 12
<212> PRT
<213> Homo sapiens

<220>
<221> MUTAGEN
<222> (5) .. (5)
<223> Leu --> Arg (L454R)

<220>
<221> MUTAGEN
<222> (7) .. (7)
<223> Leu --> Arg (L456R)

<220>
<221> MUTAGEN
<222> (8) .. (8)
<223> Glu --> Lys (E457K)

<400> 31
Leu Phe Pro Pro Leu Phe Leu Glu Val Phe Glu Asp
1 5 10
<210> 32
<211> 33
<212> PRT
<213> Homo sapiens

<400> 32
Thr Pro Ala Ile Thr Arg Val Val Asp Phe Ala Lys Lys Leu Pro Met
1 5 10 15
Phe Ser Glu Leu Pro Cys Glu Asp Gln Ile Ile Leu Leu Lys Gly Cys
20 25 30

Cys
<210> 33
<211> 12
<212> PRT
<213> Homo sapiens

<400> 33
Leu Phe Pro Pro Leu Phe Leu Glu Val Phe Glu Asp
1 5 10
<210> 34
<211> 33
<212> PRT
<213> Homo sapiens

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<400> 34  
 Thr Lys Cys Ile Ile Lys Ile Val Glu Phe Ala Lys Arg Leu Pro Gly  
 1 5 10 15  
 Phe Thr Gly Leu Ser Ile Ala Asp Gln Ile Thr Leu Leu Lys Ala Ala  
 20 25 30

Cys

<210> 35  
 <211> 12  
 <212> PRT  
 <213> Homo sapiens

<400> 35  
 Leu Phe Pro Pro Leu Phe Leu Glu Val Phe Glu Asp  
 1 5 10

<210> 36  
 <211> 33  
 <212> PRT  
 <213> Homo sapiens

<400> 36  
 Asp Lys Gln Leu Phe Thr Leu Val Glu Trp Ala Lys Arg Ile Pro His  
 1 5 10 15  
 Phe Ser Glu Leu Pro Leu Asp Asp Gln Val Ile Leu Leu Lys Ala Gly  
 20 25 30

Trp

<210> 37  
 <211> 12  
 <212> PRT  
 <213> Homo sapiens

<400> 37  
 Pro Ile Asp Thr Phe Leu Met Glu Met Leu Glu Ala  
 1 5 10

<210> 38  
 <211> 33  
 <212> PRT  
 <213> Homo sapiens

<400> 38  
 Val Glu Ala Val Gln Glu Ile Thr Glu Tyr Ala Lys Asn Ile Pro Gly  
 1 5 10 15  
 Phe Ile Asn Leu Asp Leu Asn Asp Gln Val Thr Leu Leu Lys Tyr Gly  
 20 25 30

Val

<210> 39  
 <211> 12  
 <212> PRT  
 <213> Homo sapiens

<400> 39  
 Ser Leu His Pro Leu Leu Gln Glu Ile Tyr Lys Asp  
 1 5 10

<210> 40  
 <211> 33  
 <212> PRT  
 <213> Homo sapiens

<400> 40  
 Ser Tyr Ser Ile Gln Lys Val Ile Gly Phe Ala Lys Met Ile Pro Gly  
 1 5 10 15  
 Phe Arg Asp Leu Thr Ser Glu Asp Gln Ile Val Leu Leu Lys Ser Ser

20

25

30

Ala

<210> 41

<211> 12

<212> PRT

<213> Homo sapiens

<400> 41

Lys Leu Thr Pro Leu Val Leu Glu Val Val Phe Gly Asn  
1 5 10

<210> 42

<211> 33

<212> PRT

<213> Homo sapiens

<220>

<221> MUTAGEN

<222> (12) .. (12)

<223> Lys --> Ala (K362A)

<220>

<221> MUTAGEN

<222> (26) .. (26)

<223> Val --> Arg (V376R)

<400> 42

Asp Arg Glu Leu Val His Met Ile Asn Trp Ala Lys Arg Val Pro Gly  
1 5 10 15  
Phe Val Asp Leu Thr Leu His Asp Gln Val His Leu Leu Glu Cys Ala  
20 25 30

Trp

<210> 43

<211> 12

<212> PRT

<213> Homo sapiens

<220>

<221> MUTAGEN

<222> (8) .. (8)

<223> Glu --> Lys (E542K)

<400> 43

Pro Leu Tyr Asp Leu Leu Leu Glu Met Leu Asp Ala  
1 5 10

<210> 44

<211> 33

<212> PRT

<213> Homo sapiens

<400> 44

Gly Arg Gln Val Ile Ala Ala Val Lys Trp Ala Lys Ala Ile Pro Gly  
1 5 10 15  
Phe Arg Asn Leu His Leu Asp Asp Gln Met Thr Leu Leu Gln Tyr Ser  
20 25 30

Trp

<210> 45

<211> 12

<212> PRT

<213> Homo sapiens

<400> 45

Glu Phe Pro Glu Met Leu Ala Glu Ile Ile Thr Asn  
 1 5 10  
 <210> 46  
 <211> 33  
 <212> PRT  
 <213> Homo sapiens

<400> 46  
 Glu Arg Gln Leu Leu Ser Val Val Lys Trp Ser Lys Ser Leu Pro Gly  
 1 5 10 15  
 Phe Arg Asn Leu His Ile Asp Asp Gln Ile Thr Leu Ile Gln Tyr Ser  
 20 25 30

Trp  
 <210> 47  
 <211> 12  
 <212> PRT  
 <213> Homo sapiens

<400> 47  
 Glu Phe Pro Glu Met Met Ser Glu Val Ile Ala Ala  
 1 5 10  
 <210> 48  
 <211> 33  
 <212> PRT  
 <213> Homo sapiens

<400> 48  
 Gly Lys Gln Met Ile Gln Val Val Lys Trp Ala Lys Val Leu Pro Gly  
 1 5 10 15  
 Phe Lys Asn Leu Pro Leu Glu Asp Gln Ile Thr Leu Ile Gln Tyr Ser  
 20 25 30

Trp  
 <210> 49  
 <211> 12  
 <212> PRT  
 <213> Homo sapiens

<400> 49  
 Glu Phe Pro Ala Met Leu Val Glu Ile Ile Ser Asp  
 1 5 10  
 <210> 50  
 <211> 33  
 <212> PRT  
 <213> Homo sapiens

<400> 50  
 Glu Arg Gln Leu Val His Val Val Lys Trp Ala Lys Ala Leu Pro Gly  
 1 5 10 15  
 Phe Arg Asn Leu His Val Asp Asp Gln Met Ala Val Ile Gln Tyr Ser  
 20 25 30

Trp  
 <210> 51  
 <211> 12  
 <212> PRT  
 <213> Homo sapiens

<400> 51  
 Asp Phe Pro Glu Met Met Ala Glu Ile Ile Ser Val  
 1 5 10  
 <210> 52  
 <211> 251

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<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (45)..(52)
<223> Xaa is any amino acid

<220>
<223> Position 1 corresponds to position 211 of mature peptide

<400> 52
Lys Pro Glu Pro Thr Asp Glu Glu Trp Glu Leu Ile Lys Thr Val Thr
1 5 10 15
Ala Ala His Val Ala Thr Asn Ala Gln Gly Ser His Trp Lys Asn Lys
20 25 30
Arg Lys Phe Leu Pro Glu Asp Ile Gly Gln Ala Pro Xaa Xaa Xaa Xaa
35 40 45
Xaa Xaa Xaa Lys Val Asp Leu Glu Ala Phe Ser His Phe Thr Lys
50 55 60
Ile Ile Thr Pro Ala Ile Thr Arg Val Val Asp Phe Ala Lys Lys Leu
65 70 75 80
Pro Met Phe Cys Glu Leu Pro Cys Glu Asp Gln Ile Ile Leu Leu Lys
85 90 95
Gly Cys Cys Met Glu Ile Met Ser Leu Arg Ala Ala Val Arg Tyr Asp
100 105 110
Pro Glu Ser Glu Thr Leu Thr Leu Asn Gly Glu Met Ala Val Thr Arg
115 120 125
Gly Gln Leu Lys Asn Gly Gly Leu Gly Val Val Ser Asp Ala Ile Phe
130 135 140
Asp Leu Gly Met Ser Leu Ser Ser Phe Asn Leu Asp Asp Thr Glu Val
145 150 155 160
Ala Leu Leu Gln Ala Val Leu Leu Met Ser Ser Asp Arg Pro Gly Leu
165 170 175
Ala Cys Val Ala Arg Ile Glu Lys Tyr Gln Asp Ser Phe Leu Leu Ala
180 185 190
Phe Glu His Tyr Ile Asn Tyr Arg Lys His His Val Thr His Phe Trp
195 200 205
Pro Lys Leu Leu Met Lys Val Thr Asp Leu Arg Met Ile Gly Ala Cys
210 215 220
His Ala Ser Arg Phe Leu His Met Lys Val Glu Cys Pro Thr Glu Leu
225 230 235 240
Phe Pro Pro Leu Phe Leu Glu Val Phe Glu Asp
245 250

<210> 53
<211> 251
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (45)..(50)
<223> Xaa is any amino acid

<220>
<223> Position 1 corresponds to position 211 of mature peptide

<400> 53
Lys Pro Glu Pro Thr Asp Glu Glu Trp Glu Leu Ile Lys Thr Val Thr
1 5 10 15

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Ala Ala His Val Ala Thr Asn Ala Gln Gly Ser His Trp Lys Asn Lys  
     20                 25                 30  
 Arg Lys Phe Leu Pro Glu Asp Ile Gly Gln Ala Pro Xaa Xaa Xaa Xaa  
     35                 40                 45  
 Xaa Xaa Gly Gly Lys Val Asp Leu Glu Ala Phe Ser His Phe Thr Lys  
     50                 55                 60  
 Ile Ile Thr Pro Ala Ile Thr Arg Val Val Asp Phe Ala Lys Lys Leu  
     65                 70                 75                 80  
 Pro Met Phe Cys Glu Leu Pro Cys Glu Asp Gln Ile Ile Leu Leu Lys  
     85                 90                 95  
 Gly Cys Cys Met Glu Ile Met Ser Leu Arg Ala Ala Val Arg Tyr Asp  
     100                105                110  
 Pro Glu Ser Glu Thr Leu Thr Leu Asn Gly Glu Met Ala Val Thr Arg  
     115                120                125  
 Gly Gln Leu Lys Asn Gly Gly Leu Gly Val Val Ser Asp Ala Ile Phe  
     130                135                140  
 Asp Leu Gly Met Ser Leu Ser Ser Phe Asn Leu Asp Asp Thr Glu Val  
     145                150                155                160  
 Ala Leu Leu Gln Ala Val Leu Leu Met Ser Ser Asp Arg Pro Gly Leu  
     165                170                175  
 Ala Cys Val Ala Arg Ile Glu Lys Tyr Gln Asp Ser Phe Leu Leu Ala  
     180                185                190  
 Phe Glu His Tyr Ile Asn Tyr Arg Lys His His Val Thr His Phe Trp  
     195                200                205  
 Pro Lys Leu Leu Met Lys Val Thr Asp Leu Arg Met Ile Gly Ala Cys  
     210                215                220  
 His Ala Ser Arg Phe Leu His Met Lys Val Glu Cys Pro Thr Glu Leu  
     225                230                235                240  
 Phe Pro Pro Leu Phe Leu Glu Val Phe Glu Asp  
     245                250

<210> 54  
 <211> 13  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> Position 1 corresponds to position 686 of mature peptide

<400> 54  
 Lys His Lys Ile Leu His Arg Leu Leu Gln Asp Ser Ser  
 1              5                 10  
 <210> 55  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> Position 1 corresponds to position 688 of mature peptide

<400> 55  
 Lys Ile Leu His Arg Leu Leu Gln Asp  
 1              5  
 <210> 56  
 <211> 245  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> Position 1 corresponds to position 305 of mature peptide

<400> 56  
 Ser Leu Ala Leu Ser Leu Thr Ala Asp Gln Met Val Ser Ala Leu Leu  
 1 5 10 15  
 Asp Ala Glu Pro Pro Ile Leu Tyr Ser Glu Tyr Asp Pro Thr Arg Pro  
 20 25 30  
 Phe Ser Glu Ala Ser Met Met Gly Leu Leu Thr Asn Leu Ala Asp Arg  
 35 40 45  
 Glu Leu Val His Met Ile Asn Trp Ala Lys Arg Val Pro Gly Phe Val  
 50 55 60  
 Asp Leu Thr Leu His Asp Gln Val His Leu Leu Glu Cys Ala Trp Leu  
 65 70 75 80  
 Glu Ile Leu Met Ile Gly Leu Val Trp Arg Ser Met Glu His Pro Gly  
 85 90 95  
 Lys Leu Leu Phe Ala Pro Asn Leu Leu Asp Arg Asn Gln Gly Lys  
 100 105 110  
 Cys Val Glu Gly Met Val Glu Ile Phe Asp Met Leu Leu Ala Thr Ser  
 115 120 125  
 Ser Arg Phe Arg Met Met Asn Leu Gln Gly Glu Glu Phe Val Cys Leu  
 130 135 140  
 Lys Ser Ile Ile Leu Leu Asn Ser Gly Val Tyr Thr Phe Leu Ser Ser  
 145 150 155 160  
 Thr Leu Lys Ser Leu Glu Glu Lys Asp His Ile His Arg Val Leu Asp  
 165 170 175  
 Lys Ile Thr Asp Thr Leu Ile His Leu Met Ala Lys Ala Gly Leu Thr  
 180 185 190  
 Leu Gln Gln Gln His Gln Arg Leu Ala Gln Leu Leu Leu Ile Leu Ser  
 195 200 205  
 His Ile Arg His Met Ser Asn Lys Gly Met Glu His Leu Tyr Ser Met  
 210 215 220  
 Lys Cys Lys Asn Val Val Pro Leu Tyr Asp Leu Leu Leu Glu Met Leu  
 225 230 235 240  
 Asp Ala His Arg Leu  
 245  
 <210> 57  
 <211> 237  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> Position 1 corresponds to position 305 of mature peptide

<400> 57  
 Ser Leu Ala Leu Ser Leu Thr Ala Asp Gln Met Val Ser Ala Leu Leu  
 1 5 10 15  
 Asp Ala Glu Pro Pro Ile Leu Tyr Ser Glu Tyr Asp Pro Thr Arg Pro  
 20 25 30  
 Phe Ser Glu Ala Ser Met Met Gly Leu Leu Thr Asn Leu Ala Asp Arg  
 35 40 45  
 Glu Leu Val His Met Ile Asn Trp Ala Lys Lys Arg Val Pro Gly Phe  
 50 55 60  
 Val Asp Leu Thr Leu His Asp Gln Val His Leu Glu Cys Ala Trp  
 65 70 75 80  
 Leu Glu Ile Leu Met Ile Gly Leu Val Trp Arg Ser Met Glu His Pro  
 85 90 95  
 Gly Lys Leu Leu Phe Ala Pro Asn Leu Leu Asp Arg Asn Gln Gly  
 100 105 110  
 Lys Cys Val Gly Gly Met Val Glu Ile Phe Asp Met Leu Leu Ala Thr  
 115 120 125  
 Ser Ser Arg Phe Arg Met Met Asn Leu Gln Gly Glu Glu Phe Val Cys  
 130 135 140  
 Leu Lys Ser Ile Ile Leu Leu Asn Ser Gly Val Tyr Thr Phe Glu Lys

145	150	155	160
Asp His Ile His Arg Val Leu Asp Lys	Ile Thr Asp Thr Leu Ile His		
165	170	175	
Leu Met Ala Lys Ala Gly Leu Thr Leu Gln Gln Gln His Gln Arg Leu			
180	185	190	
Ala Gln Leu Leu Leu Ile Leu Ser His Ile Arg His Met Ser Asn Lys			
195	200	205	
Gly Met Glu His Leu Tyr Ser Met Lys Cys Lys Asn Val Val Pro Leu			
210	215	220	
Tyr Asp Leu Leu Leu Glu Met Leu Asp Ala His Arg Leu			
225	230	235	

<210> 58  
<211> 11  
<212> PRT  
<213> Homo sapiens

<220>

<223> Position 1 corresponds to position 687 of mature peptide

<400> 58			
His Lys Ile Leu His Arg Leu Leu Gln Asp Ser			
1	5	10	

<210> 59  
<211> 246  
<212> PRT  
<213> Homo sapiens

<220>

<223> Position 1 corresponds to position 306 of mature peptide

<400> 59			
Leu Ala Leu Ser Leu Thr Ala Asp Gln Met Val Ser Ala Leu Leu Asp			
1	5	10	15
Ala Glu Pro Pro Ile Leu Tyr Ser Glu Tyr Asp Pro Thr Arg Pro Phe			
20	25	30	
Ser Glu Ala Ser Met Met Gly Leu Leu Thr Asn Leu Ala Asp Arg Glu			
35	40	45	
Leu Val His Met Ile Asn Trp Ala Lys Arg Val Pro Gly Phe Val Asp			
50	55	60	
Leu Thr Leu His Asp Gln Val His Leu Leu Glu Cys Ala Trp Leu Glu			
65	70	75	80
Ile Leu Met Ile Gly Leu Val Trp Arg Ser Met Glu His Pro Gly Lys			
85	90	95	
Leu Leu Phe Ala Pro Asn Leu Leu Leu Asp Arg Asn Gln Gly Lys Cys			
100	105	110	
Val Glu Gly Met Val Glu Ile Phe Asp Met Leu Leu Ala Thr Ser Ser			
115	120	125	
Arg Phe Arg Met Met Asn Leu Gln Gly Glu Glu Phe Val Cys Leu Lys			
130	135	140	
Ser Ile Ile Leu Leu Asn Ser Gly Val Tyr Thr Phe Leu Ser Ser Thr			
145	150	155	160
Leu Lys Ser Leu Glu Glu Lys Asp His Ile His Arg Val Leu Asp Lys			
165	170	175	
Ile Thr Asp Thr Leu Ile His Leu Met Ala Lys Ala Gly Leu Thr Leu			
180	185	190	
Gln Gln Gln His Gln Arg Leu Ala Gln Leu Leu Leu Ile Leu Ser His			
195	200	205	
Ile Arg His Met Ser Asn Lys Gly Met Glu His Leu Tyr Ser Met Lys			
210	215	220	
Cys Lys Asn Val Val Pro Leu Tyr Asp Leu Leu Glu Met Leu Asp			
225	230	235	240

Ala His Arg Leu His Ala  
245

<210> 60

<211> 11

<212> PRT

<213> Homo sapiens

<220>

<223> Position 1 corresponds to position 686 of mature peptide

<400> 60

Lys His Lys Ile Leu His Arg Leu Leu Gln Asp

1 5 10